

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04L 29/06, G06F 17/30		A3	(11) International Publication Number: WO 97/41673
			(43) International Publication Date: 6 November 1997 (06.11.97)
<p>(21) International Application Number: PCT/US97/06767</p> <p>(22) International Filing Date: 22 April 1997 (22.04.97)</p> <p>(30) Priority Data: 08/634,900 26 April 1996 (26.04.96) US</p> <p>(71) Applicant: FREEDOM OF INFORMATION, INC. [US/US]; Suite 1, 248 Franklin Street, Cambridge, MA 02139 (US).</p> <p>(72) Inventor: GERACE, Thomas, A.; Suite 1, 248 Franklin Street, Cambridge, MA 02139 (US).</p> <p>(74) Agents: WAKIMURA, Mary, Lou et al.; Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, MA 02173 (US).</p>			(81) Designated States: CA, IL, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
			<p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 5 February 1998 (05.02.98)</p>
<p>(54) Title: COMPUTER NETWORK AND METHOD FOR DETERMINING USER BEHAVIOUR</p> <pre> graph TD User --> WebServer[Web Server 27] subgraph WebServer PC[Program Controller 79] end User <--> PC PC <--> AD[Agate Data Assembly 71] PC <--> UP[User Profile Member 73] PC <--> AM[Ad Module 75] </pre>			
<p>(57) Abstract</p> <p>Computer network method and apparatus provides targeting of appropriate audience based on psychographic or behavioral profiles of end users. The psychographic profile is formed by recording computer activity and viewing habits of the end user. Content of categories of interest and display format in each category are revealed by the psychographic profile, based on user viewing of agate information. Using the profile (with or without additional user demographics), advertisements are displayed to appropriately selected users. Based on regression analysis of recorded responses of a first set of users viewing the advertisements, the target user profile is refined. Viewing by and regression analysis of recorded responses of subsequent sets of users continually auto-targets and customizes ads for the optimal end user audience.</p>			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Larvia	SZ	Switzerland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	NK	Niger	US	United States of America
CA	Canada	IT	Italy	NL	Netherlands	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NO	Norway	VN	Viet Nam
CG	Congo	KE	Kenya	NZ	New Zealand	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	PL	Poland	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PT	Portugal		
CM	Cameroon	KR	Republic of Korea	RO	Romania		
CN	China	KZ	Kazakhstan	RU	Russian Federation		
CU	Cuba	LC	Saint Lucia	SD	Sudan		
CZ	Czech Republic	LI	Liechtenstein	SE	Sweden		
DE	Germany	LK	Sri Lanka	SG	Singapore		
DK	Denmark	LR	Liberia				
EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 97/06767A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04L29/06 G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 446 891 A (KAPLAN CRAIG A ET AL) 29 August 1995 see column 1, line 12 - line 16 see column 2, line 20 - line 44 see column 5, line 7 - line 20 see column 13, line 5 - column 14, line 48	1,2,9, 10,13, 14,18, 19,25,26
Y		3-6,11, 15,27
A	----	7,8,12, 16,17, 20-24,28
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

3

Date of the actual completion of the international search

Date of mailing of the international search report

28 October 1997

06.11.97

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Padenlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl;
Fax: (+31-70) 340-3616

Authorized officer

Vaskimo, K

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 97/06767

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BUSSEY H E ET AL: "SERVICE ARCHITECTURE, PROTOTYPE DESCRIPTION, AND NETWORK IMPLICATIONS OF A PERSONALIZED INFORMATION GRAZING SERVICE" MULTIPLE FACETS OF INTEGRATION, SAN FRANCISCO, JUNE 3 - 7, 1990, vol. VOL. 3, no. CONF. 9, 3 June 1990, INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, pages 1046-1053, XP000164339 see abstract see paragraph 1. - paragraph 3.4.	1,2,9, 10,13, 14,18, 19,25,26
Y		3-6,11, 15,27
A		7,8,12, 16,17, 20-24,28
X	*** YAN T W ET AL: "SIFT - A TOOL FOR WIDE-AREA INFORMATION DISSEMINATION" USENIX TECHNICAL CONFERENCE, 16 January 1995, pages 177-186, XP000617276 see abstract see paragraph 1. - paragraph 4.1	1,2,9, 10,13, 14,18, 19,25,26
Y		3-6,11, 15,27
A		7,8,12, 16,17, 20-24,28
X	*** PAZZANI M ET AL: "LEARNING FROM HOTLISTS AND COLDLISTS: TOWARDS A WWW INFORMATION FILTERING AND SEEKING AGENT" PROCEEDINGS. INTERNATIONAL CONFERENCE ON TOOLS WITH ARTIFICIAL INTELLIGENCE, 1 January 1995, pages 492-495, XP000567438 see abstract see paragraph 1 - paragraph 4	1,2,9, 13,14, 18,19, 25,26
Y		3-6,11, 15,27
A		7,8,12, 16,17, 20-24,28
	*** -/-	
3		

INTERNATIONAL SEARCH REPORT

Interr. Application No.
PCT/US 97/06767

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	D. RAGGETT: "A review of the HTML + document format" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 27, no. 2, November 1994, pages 135-145, XP004037984 see abstract see paragraph 1.	3,4
A	---	1,5-7,9, 11,13, 18,25,26
Y	S. GESSLER, A. KOTULLA: "PDAs as mobile WWW browsers" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 28, no. 1-2, December 1995, pages 53-59, XP004001210 see abstract see paragraph 3.2.	3,4
A	---	1,9,13
Y	J.E. DONNELLEY: "WWW media distribution via Hopwise Reliable Multicast" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 27, no. 6, April 1995, pages 781-788, XP004013180 see paragraph 1.	5,6,11, 15,27
A	---	1,9,13
Y	R. JONES: "Digital's World-Wide Web server: A case study" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 27, no. 2, November 1994, pages 297-306, XP004038001 see abstract see paragraph 1. see paragraph 10. - paragraph 10.1.	5,6,11, 15,27
A	---	1,9,13
A	US 5 504 675 A (CRAGUN BRIAN J ET AL) 2 April 1996 see column 1, line 9 - line 12 see column 2, line 58 - column 3, line 46 see column 4, line 36 - line 49	1-3,6,9, 10,13, 14,19-21
A	---	1-3,6,9, 10,13, 14,19-21
3	M. BETTS: "Sentry cuts access to naughty bits" COMPUTERS AND SECURITY, vol. 14, no. 7, 1995, page 615 XP004000204 see the whole document ---	1-3,6,9, 10,13, 14,19-21

INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/US 97/06767

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 95 23371 A (KIRK THOMAS ; LEVY ALON YITZCHAK (US); SRIVASTAVA DIVESH (US)) 31 August 1995 see page 1, line 3 - line 19 -----	1-3,6,9, 10,13, 14,19-21

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.
PCT/US 97/06767

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5446891 A	29-08-95	NONE	
US 5504675 A	02-04-96	CA 2155887 A	23-06-96
WO 9523371 A	31-08-95	US 5655116 A US 5600831 A CA 2161233 A EP 0696366 A JP 9503088 T	05-08-97 04-02-97 31-08-95 14-02-96 25-03-97